Remarks/Arguments

Elections/Restrictions

In response to the Examiner's restriction requirement mailed September 16, 2003 (paper number 9), Applicant elected the claims of Group I, drawn to a method of preparing a vector. However, by oversight, Applicant erroneously elected only claims 1-5 and neglected to elect claim 11 as part of Group I. Since claim 11 is drawn to a method of preparing a vector and was included in Group I as originally defined by the Examiner, Applicant hereby elects claim 11 along with claims 1-5. Applicant thanks the Examiner for pointing out this omission.

Priority

Applicant does not claim priority under 35 U.S.C. §120 to either prior Application No. 09/225,9910 filed January 5, 1999 or prior Application No. 09/897,712 filed June 26, 2001.

Sequence Compliance

A sequence listing is attached.

Information Disclosure Statement

Applicant thanks the Examiner for including signed PTO 1449 forms with the Office Action. On one of these forms, the International Search Report for corresponding PCT application PCT/US01/22836 was listed but was not considered. Apparently, Applicant failed to provide a copy. Applicant apologizes for this oversight. A copy of the International Search Report, and a new PTO 1449 are included herewith. Applicant respectfully requests that the Examiner consider the reference and sign and return the PTO 1449.

Rejections under 35 U.S.C. §102

The current rejections under 35 U.S.C. §102 as being anticipated by Hodgson et al. (WO 98/38326) and Huse et al. (US Pat. No. 5,128,256) are moot in light of the instant amendments to the pending claims.

The Examiner asserts that both Hodgson et al. and Huse et al. disclose a method of preparing a vector, comprising the steps of providing at least two isolated nucleic acid molecules, each of which contains a portion of vector sequence, providing at least one isolated nucleic acid molecule containing insert sequence, and admixing the nucleic acid molecules with one another under linkage conditions so that a hybrid molecule in which each of the isolated molecules is linked together is produced.

Claims 1-5 and 11 have amended to more specifically recite the method of preparing a vector described in the present disclosure. The present invention provides a unique method of preparing a vector in which at least two collections of nucleic acid molecules are provided, each collection containing a plurality of at least two individual nucleic acid molecules that have distinct characteristics. The user selects a particular individual nucleic acid molecule from each collection and the selected molecules are then linked together, forming a vector tailored to the user's specification. This method allows the creation of a multitude of different vectors from a limited number of starting pools of nucleic acid molecules. Rather than relying on mass-produced commercial vectors containing only limited features offered by the relevant manufacturer, the presently claimed method permits the user to quickly and efficiently create a vector designed specifically to meet his or her experimental needs. Neither Hodgson et al. nor Huse et al. teach or even suggest such a method.

Rejections under 35 U.S.C. §103

Claims 1-5 and 11 are rejected as being unpatentable over Huse et al. or Hodgson et al. in view of Jarrell (US Pat. No. 5,498,531) or Jarrell (US Pat No. 5,780,272). The Examiner asserts that the instant specification cites the Jarrell references as teaching methods of preparing vectors comprising providing at least two nucleic acid molecules that contain intronic elements having an ability to trans-splice with each other. The Examiner further asserts that it would have been obvious for one of ordinary skill in the art to have modified the method of preparing vectors disclosed in the present invention by placing intronic elements in the nucleic acid molecules such that trans-splicing can take place between them. Applicant traverses the Examiner's rejection and respectfully requests withdrawal thereof for the following reasons:

Both Hodgson et al. and Huse et al. disclose a method of preparing a vector comprising the steps of providing at least two isolated nucleic acid molecules, each of which contains a portion of vector sequence, providing at least one isolated nucleic acid molecule containing insert sequence, and admixing the nucleic acid molecules with one another under linkage conditions so that a hybrid molecule in which each of the isolated molecules is linked together is produced.

Jarrell (US Pat. No. 5,498,531) and Jarrell (US Pat No. 5,780,272) disclose methods of joining nucleic acid molecules in which intron sequences are placed in the nucleic acid molecules that are to be joined. These intron sequences are capable of directing trans-splicing between the nucleic acid molecules. Such a method has the advantages of achieving independence from limitations in both restriction endonuclease and particular sequence requirements.

The present claims recite a novel method of preparing a vector through the utilization of at least two collections of nucleic acid molecules, each collection containing a plurality of at least two individual nucleic acid molecules having distinct characteristics. By allowing the user

to select a particular individual nucleic acid molecule from each collection, the present invention permits the user to quickly and efficiently create a vector designed specifically to meet his or her experimental needs. The pending claims have been amended to more specifically recite the method of preparing a vector described in the present disclosure, distinguishing this method from previously known methods of preparing vectors. None of the cited references, either alone or in combination, teach or suggest the method of preparing a vector by joining individual nucleic acids wherein each nucleic acid is selected from a collection of nucleic acids. Thus, Applicant asserts that the Examiner's rejection under 35 U.S.C. §103 is obviated by the instant amendments to the pending claims.

Rejections under 35 U.S.C. §112

Claim 3 is rejected under 35 U.S.C. §112 for failing to particularly point out and distinctly claim the subject matter of the invention. The Examiner asserts that claim 3 is vague and indefinite in its recitation of an "intronic element". In response to the rejection, claim 3 has been amended to more specifically recite a "splicing recognition site". Additionally, new dependent claim 13 has been added to further include nucleic acid molecules that contain catalytic intron sequences that direct the trans-splicing reaction. Support for the new claim can be found in US Patents 5,498,531 and 5,780,272, each of which is incorporated by reference in the present application (page 23, lines 11-16).